AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of managing message size for a connection between a data source and a data receiver on a network comprising the steps of:

obtaining a determined maximum segment size based on the maximum segment sizes of a plurality of packet transport networks between a data source and a data receiver;

negotiating a maximum segment size for a connection with a data receiver to reduce message fragmentation by altering an announcement, the steps comprising:

(i) receiving an announcement from said data receiver of a first connection between said data source and said data receiver, wherein said announcement denotes a maximum segment size;

(ii) when the determined maximum segment size is smaller than the said maximum segment size in said announcement message, generating an altered announcement message by changing said maximum segment size in said announcement of said first connection to [[a]] the determined maximum segment size[[,]] to reduce message fragmentation on packet transport networks between said data source and said data receiver. ~~wherein the determined maximum segment size reduces message fragmentation~~; and,

sending subsequent messages from the data source to the data receiver using the determined maximum segment size.

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2. (Previously Presented) The method of claim 1 further comprising recalculating a checksum of said announcement for use in the altered announcement.

3. (Original) The method of claim 1, wherein said announcement comprises a first message of a data stream in said connection.

4. (Original) The method of claim 1, wherein said announcement comprises a SYN bit.

5. (Original) The method of claim 1, wherein said first connection is one of any virtual connections utilizing TCP/IP between said data source and said data receive.

6. (Original) The method of claim 1, wherein changing said maximum segment size comprises changing said maximum segment size in a TCP header in said announcement.

7. (Original) The method of claim 1, wherein said determined maximum segment size is pre-programmed into a database.

8. (Original) The method of claim 1, wherein said data source comprises customer premise equipment, and wherein said receiver comprises customer premise equipment.

9. (Cancelled)

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10. (Original) The method of claim 1, wherein said determined maximum segment size avoids re-assembly of fragments.

11. (Currently amended) A method of reducing message fragmentation for a connection between a data source and a data receiver on a network comprising the steps of:

receiving a first message fragment of a first connection between said data source and said data receiver;

storing a maximum segment size of said first message fragment of said first connection, wherein said maximum segment size exists in accordance with said first message fragment;

resetting said first connection, wherein resetting said first connection initiates a second connection;

receiving an announcement of said second connection; [[and]]

generating an altered announcement of said second connection by placing said maximum segment size into said announcement of said second connection ~~in which messages are sent from the data source to the data receiver with reduced message fragmentation.~~ ; and

sending subsequent messages from the data source to the data receiver using the said maximum segment size to reduce message fragmentation between said data source and said data receiver.

12. (Previously Presented) The method of claim11 further comprising recalculating a checksum of said announcement of said second connection.

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13. (Original) The method of claim 11, wherein said first message fragment comprises a first message of a data stream in said connection.

14. (Original) The method of claim 11, wherein said first message comprises a set SYN bit.

15. (Original) The method of claim 11, wherein said first connection is one of any virtual connections utilizing TCP/IP between said data source and said data receiver.

16. (Original) The method of claim 11, wherein said second connection is a connection following said first connection.

17. (Original) The method of claim 11, wherein storing said maximum segment size comprises storing said maximum segment size in a database.

18. (Original) The method of claim 11, wherein resetting said first connection comprises closing said first connection by setting a RST bit.

19. (Original) The method of claim 11, wherein resetting said first connection initiates said second connection.

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20. (Original) The method of claim 11, wherein placing said maximum segment message size into said announcement of said second connection comprises placing said maximum segment message into a TCP header within said announcement of said second connection.

21. (Original) The method of claim 11, wherein said data source comprises customer premise equipment, and wherein said data receiver comprises customer premise equipment.

22. (Currently Amended) A method of reducing message fragmentation between the data source and the data receiver connected by a network comprising the steps of:

intercepting a first announcement of a first connection between said data source and said data receiver;

predicting a predicted maximum segment size for said first connection, wherein said predicted maximum segment size is placed in a signal;

sending said signal with a no-fragment option set to said data source and said data receiver;

storing a determined maximum segment size, whereupon said determined maximum segment size results from a fragment free signal response;

receiving subsequent announcements of connections and inserting said determined maximum segment size into said subsequent announcements of connections to reduce message fragmentation between said data source and said data receiver; and[[,]]

~~sending subsequent messages from the data source to the data receiver using the~~

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~~determined maximum segment size wherein the determined maximum segment size reduces message fragmentation~~.

23. (Previously Presented) A method in claim 22, wherein said determined maximum segment size is iteratively predicted until a fragment free signal response is received.

24. (Original) A method in claim 22, wherein said no-fragment option is set in an IP header within said signal.

25. (Currently Amended) An apparatus for reducing message fragmentation between a data source and a data receiver connected by a network comprising:

a network device connected to the network, wherein said network device intercepts communications between said data source and said data receiver, wherein said communications denote a maximum segment size for the network, and wherein said network device changes the maximum segment size of said communications to a determined maximum segment size that provides a reduction of message fragmentation ~~is to be used~~ in data transmission between said data source and said data receiver; and

a storage device connected to said network device for storing said determined maximum segment size for data transmitted between said data source and said data receiver; wherein said network device stores said determined maximum segment sizes in accordance to data communication between said data source and data receiver.

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26. (Original) An apparatus in claim 25, wherein said announcement comprises a first message, said first message fragment comprises a first message of a data stream in said connection, and wherein said first message comprises a set SYN bit.

27. (Original) An apparatus in claim 26, wherein the network device iteratively predicts said determined maximum segment size.

28. (Original) An apparatus as claimed in Claim 26, wherein said storage device comprises a database.

29. (Original) An apparatus of reducing fragmentation between a data source and a data receiver as claimed in Claim 26, wherein said network device comprises a gateway device.

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